

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009788**Date Inspected:** 27-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Yumin and Li Jia**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Joe Alaniz was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

Trail Assembly Yard

1AW

SMAW repair welding on missdrilled hole located 4000mm from OBW1A-003 and 650mm off counter weight side of segment. Welder is identified as Mr. Han Xiaofeng (054467). ZPMC QC is identified as Wu Zhi Cheng. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-4G (4F)-Repair-1 and WRR repair procedure #8278.

5AW

SMAW repair welding on various bottom plate stiffeners located at panel point 29.

Welder is identified as Mr. Han Feng Jiahong (054016). ZPMC QC is identified as Xu Yumin.

The welding variables recorded by QC appeared to comply with WPS-345-SMAW-1G (1F)-FCM-Repair-1.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

5AE

SMAW repair welding on various side plate stiffeners located at panel point 29 on cross beam side.

Welder is identified as Mr. Zhang Feng (049769). ZPMC QC is identified as Xu Yumin.

The welding variables recorded by QC appeared to comply with WPS-345-SMAW-1G (1F)-FCM-Repair-1.

This QA Inspector observed ZPMC Magnetic Particle (MT) Technician performing MT on various locations in the trial assembly yard. Locations are as followed:

1AW

1. Excavation areas on OBE1A-003 bottom plate splice. Y Locations and numbers of transverse indications are as followed at the time of observation:

1. Y location 170mm (off cross beam side) and approximately 7 indications.
2. Y location 1145mm (off cross beam side) and approximately 3 indications.
3. Y location 1810mm (off cross beam side) and approximately 4 indications.
4. Y location 2280mm (off cross beam side) and approximately 9 indications.

This QA Inspector observed ZPMC Ultra Sonic (UT) Technician performing UT on various locations in the trial assembly yard. Locations are as followed:

1AW

1. UT (retest) was performed by ABF at welds OBE2-003 (deck plate) and OBE2A-005 repair areas with a 70° wedge. Scanning “D” pattern was observed at time of UT inspection. Y locations per weld joints are as followed:

Miscellaneous Work In Progress

QA Inspector observed ZPMC’s personnel performing various job functions in the trial assembly yard. Locations and description of work are as followed:

UT reject excavation was performed at OBE1A-003 bottom plate (internal) weld joint on segment 1E. Y locations (pulled from cross beam side), lengths and depths area as followed:

1. Y location 80mm (off bike path side), length of excavation 490mm, depth of excavation approximately between 20.30~22.75mm.
2. Y location 170mm (off bike path side), length of excavation 220mm, depth of excavation approximately between 16.12~17.91mm.
3. Y location 1145mm (off bike path side), length of excavation 190mm, depth of excavation approximately between 16.44~18.44mm.
4. Y location 1810mm (off bike path side), length of excavation 125mm, depth of excavation approximately between 18.01~19.71mm.
5. Y location 2280mm (off bike path side), length of excavation 800mm, depth of excavation approximately

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

between 14.87~16.75mm.

6. Y location 3460mm (off bike path side), length of excavation 470mm, depth of excavation approximately between 16.55~18.94mm.

7. Y location 4730mm (off bike path side), length of excavation 300mm, depth of excavation approximately between 16.55~18.94mm.

8. Y location 6570mm (off bike path side), length of excavation 125mm, depth of excavation approximately between 16.45~21.65mm.

9. Y location 8190mm (off bike path side), length of excavation 200mm, depth of excavation approximately between 18.13~21.32mm.

1BE

During random in process visual inspection, this Caltrans Quality Assurance (QA) Inspector observed ZPMC welder Dong Hai Tao (067183) welding MT indications reported on 10-26-09, being repaired without an engineer approval or a CWR. Engineer was not notified of the removal of indication at noted weld. QA Inspector noted that ZPMC CWI Quality Control (QC) Inspector was not present during the repair welding operations during the time of this QA Inspector observation from 0800 to 0900. This time frame exceeds the allowable maximum time for QC Inspection coverage as required by Section 8-3 of the Special Provisions. This QA Inspector issued an incident report on the above noted repair work.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang (134-8257-0045), who represents the Office of Structural Materials for your project.

Inspected By:	Alaniz,Joe	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
